



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,224	01/30/2004	Michael Joe Nolan	APN-152-A	9580

22825 7590 07/13/2005

WILLIAM M HANLON, JR  
YOUNG & BASILE, PC  
3001 WEST BIG BEAVER ROAD  
SUITE 624  
TROY, MI 48084-3107

EXAMINER

KERSHTEYN, IGOR

ART UNIT	PAPER NUMBER
----------	--------------

3745

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/769,224		NOLAN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Igor Kershteyn		3745	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 9 is/are rejected.
- 7) ☒ Claim(s) 6 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>04/12/2004</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Welter et al. (6,470,791).

In figures 1, 1a, and 10, Welter et al. teach a piston and cylinder assembly 1 comprising: a cylinder 6 defining a central bore 7 and having an open rear end (not numbered); a piston 8 slidably mounted in the bore 7 and having a rear end defining a rearwardly opening concavity (not numbered), a retainer 37 positioned in the concavity; a pushrod 19 extending forwardly into the bore 7 through the open rear end of the

cylinder 6 and having a forward, head end 11 captured by the retainer 37; and a clip 14i positioned in the concavity and fixedly engaging the retainer 37 to preclude displacement of the retainer 37 from the concavity.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Koth (6,813,991).

In figures 1-5, Koth teaches a piston and cylinder assembly 10 comprising: a cylinder 12 defining a central bore (not numbered) and having an open rear end (not numbered); a piston 20 slidably mounted in the bore and having a rear end 20A defining a rearwardly opening concavity 20B, a retainer 30 positioned in the concavity 20B; a pushrod 22 extending forwardly into the bore through the open rear end of the cylinder 12 and having a forward, head end 22A captured by the retainer 30; and a clip 34 positioned in the concavity 20B and fixedly engaging the retainer 30 to preclude displacement of the retainer 30 from the concavity 20B.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT Publication No. WO 02/070314 A1.

In figures 1-5, 02/070314 teaches a piston and cylinder assembly 10 comprising: a cylinder 12 defining a central bore (not numbered) and having an open rear end (not numbered); a piston 20 slidably mounted in the bore and having a rear end 20A defining a rearwardly opening concavity 20B, a retainer 30 positioned in the concavity 20B; a pushrod 22 extending forwardly into the bore through the open rear end of the cylinder

Art Unit: 3745

12 and having a forward, head end 22A captured by the retainer 30; and a clip 34 positioned in the concavity 20B and fixedly engaging the retainer 30 to preclude displacement of the retainer 30 from the concavity 20B.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welter et al. (6,470,791) as applied to claim 1 above, and further in view of Kehl et al. (4,650,363).

Welter et al. teach all the claimed subject matter except that they don't teach the aligned annular grooves defined in the exterior of the retainer and the interior of the concavity, and the clip is received in the aligned grooves.

Kehl et al., in figure, teaches a piston 4 having aligned annular grooves 14 and 20 defined in the exterior of the retainer 6 and the interior of the concavity 13, and the clip 5 is received in the aligned grooves 14,20.

Since Welter et al. and Kehl et al. are analogous art because they are from the same field of endeavor, that is the power assisted brake device art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the pushrod end retaining arrangement of Welter et al. with the aligned annular

Art Unit: 3745

grooves defined in the exterior of the retainer and the interior of the concavity, and the clip is received in the aligned grooves as taught by Kehl et al. for the purpose of preventing improper disassembly by unauthorized person.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Publication No. WO 02/070314 A1 in view of Leigh-Monstevens et al. (4,831,916).

02/070314 teaches all the claimed subject matter except that it doesn't teach the concavity includes a forward portion having an arcuate cross-sectional configuration; and the retainer includes a forward portion having an arcuate cross-sectional configuration conforming to the cross-sectional configuration of the forward concavity portion.

Leigh-Monstevens et al., in figures 1 and 2, teach a piston and cylinder assembly having a piston 18, a concavity 18g in the piston 18, a retainer 20, the concavity 18g, the concavity includes a forward portion 18h having an arcuate cross-sectional configuration; and the retainer 20 includes a forward portion 20B having an arcuate cross-sectional configuration conforming to the cross-sectional configuration of the forward concavity portion 18h.

Since 02/070314 and Leigh-Monstevens et al. are analogous art because they are from the same field of endeavor, that is the master cylinder art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the pushrod end retaining arrangement of 02/070314 with the the concavity and the retainer have conforming, generally arcuate cross-sectional profiles whereby the

Art Unit: 3745

retainer fits flush within the concavity as taught by Leigh-Monstevens et al. for the purpose of distributing the loading imparted to the piston from the pushrod over a relatively large effective area of the piston so as to minimize stress and distortion of the piston.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication No. WO 02/070314 A1 in view of Leigh-Monstevens et al. (4,831,916).

02/070314 teaches all the claimed subject matter except that it doesn't teach the concavity and the retainer have conforming, generally arcuate cross-sectional profiles whereby the retainer fits flush within the concavity.

Leigh-Monstevens et al., in figures 1 and 2, teach a piston and cylinder assembly having a piston 18, a concavity 18g in the piston 18, a retainer 20, the concavity 18g and the retainer 20 have conforming, generally arcuate cross-sectional profiles 18h, 20b whereby the retainer 20 fits flush within the concavity 18g.

Since 02/070314 and Leigh-Monstevens et al. are analogous art because they are from the same field of endeavor, that is the master cylinder art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the pushrod end retaining arrangement of 02/070314 with the the concavity and the retainer have conforming, generally arcuate cross-sectional profiles whereby the retainer fits flush within the concavity as taught by Leigh-Monstevens et al. for the purpose of distributing the loading imparted to the piston from the pushrod over a

Art Unit: 3745

relatively large effective area of the piston so as to minimize stress and distortion of the piston.

### ***Allowable Subject Matter***

Claims 6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of two patents.

Shutt (3,173,266) is cited to show a cylinder and piston assembly having a piston, a concavity, a retainer, and a clip but fails to teach the clip fixedly engaging the retainer.

Shaeffer et al. (5,154,532) is cited to show a concavity, a pushrod, a retainer and a clip fixedly engaged to the retainer but fails to teach a piston and a cylinder arrangement.

### ***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is



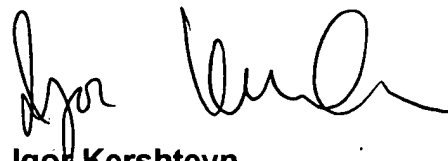
Art Unit: 3745

**(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK  
July 5, 2005

A handwritten signature in black ink, appearing to read 'Igor Kershteyn', is written over a horizontal line.

**Igor Kershteyn**  
**Patent examiner.**  
**Art Unit 3745**